

REMARKS

Applicants acknowledge that the Office Action dated June 8, 2005 has been made final. Accordingly, Applicants have submitted herewith a Request for Continued Examination. Further consideration of this application in view of the amendments set forth hereinabove, as well as the comments provided hereinbelow, is respectfully requested.

Claim 19 has been rejected under 35 U.S.C. §112, second paragraph, for failing to particularly point out and distinctly claim the invention, based on certain formal issues cited by the Examiner at page 2 of the Office Action. In response to this ground of rejection, Claim 19 has been amended in a manner which addresses and is believed to resolve the cited formal issues. In particular, Claim 19 now recites that the substrate has conductor wire films and electronic elements, such that a clear antecedent basis is provided for the recitation that the entire exposed surfaces of the conductor wire films are covered, etc. Accordingly, reconsideration and withdrawal of this ground of rejection are respectfully requested.

Claim 19 has been rejected under 35 U.S.C. §102(e) as anticipated by Hosoya (U.S. Patent No. 6,879,033), while Claims 18 and 20-22 have been rejected under 35 U.S.C. §102(b) as anticipated by Masuda (U.S. Patent No. 5,982,272). In addition, Claims 18, 19, 22, 24 and 25 have been rejected under 35 U.S.C. §103(a) as unpatentable over Takayama et al (U.S. Patent No.

5,977,733) and Claim 23 has been rejected as unpatentable over Takayama et al in view of Komada-et al (U.S. Patent No. 6,332,442). However, for the reasons set forth hereinafter, Applicants respectfully submit that all claims which remain of record in this application are now allowable.

In response to the rejection of Claim 19 over Hosoya, Applicants have submitted herewith a translation of the priority document for this application, and hereby state that such translation is accurate. Accordingly, Hosoya does not constitute prior art with regard to the present invention, and reconsideration and withdrawal of this ground of rejection are respectfully requested.

The rejection of Claims 18 and 20-22 as anticipated by Masuda is traversed, for the reasons set forth hereinafter.

The present invention is directed to a structure for an electronic device having electronic components which are mounted on a surface thereof and connected by surface mounted conductors. In order to prevent corrosion of such a device which, in certain automotive applications, is inserted into an environment of highly corrosive gases, its surface, including the electronic components and conductors is coated with a non-conductive material such as glass or a resin.

In order to provide access to the electronic components mounted on the surface of the substrate, openings are provided through the non-conductive glass or resin coating. However, the latter openings create the possibility that

corrosive gases in the surrounding environment would be able to penetrate to corrode the conductors on the surface of the substrate, particularly where the conductors are made of silver or a silver alloy. In order to prevent such corrosion, the conductor in the area of the openings are covered with an overcoating of a solder or a metallic paste.

The overcoatings according to the present invention are in the form of a film, for protecting the surface of an electronic device, which differs fundamentally from the bulk structure disclosed in Masuda, which generally is directed to a variable resistor that includes moving parts. In Masuda, the "operating portion" 51 regulates pressure of the slider against a terminal 21.

The electronic device according to the present invention utilizes thick film technology, as is apparent from the text of the specification. (See also, Claim 11.) Accordingly, both of Claims 18 and 19 have been amended to recite that the electronic elements and the insulating overcoat comprise films formed according to such thick film technology.

The latter feature is neither taught nor suggested by Masuda. Moreover, the Masuda apparatus, being directed to a variable resistor, in which the resistance is varied by moveable components does not and cannot use such thick film elements, as recited in Claims 18 and 19. Finally, while Applicants believe that the claims distinguish over Matsuda for the reasons set forth above, it is noted that insofar as Applicants have been able to determine, the Masuda

reference does not mention a solder whose main component is tin. Moreover, while the reference mentions at Column 9, lines 8-12 that certain elements may be plated by, among other things, "silver", nowhere, insofar as Applicants have been able to determine, does it teach or suggest providing conductor wires made of silver or a silver alloy.

In this regard, it is noted that in certain automotive applications, for which the present invention is intended, the operating environment of the device according to the invention is highly corrosive. While conductor wires made of silver or silver alloys, as recited in the claims, have a high electric conductivity, they tend to be corroded in a corrosive gas flow. Plating with silver is therefore not suitable according to the present invention. While silver is used for the conductors themselves, it is not useful for preventing corrosion of the electronic device, as noted. Thus, according to the present invention, the exposed conductor wires and other parts are covered with glass or resin as well.

The Takayama et al reference does disclose that the surface layer 2a of the contact point is preferably made of gold or rhodium, and that the intermediate layer 2b is gold, as noted at Column 6, lines 42-55 and at Column 6, line 6 through Column 7, line 8. While Takayama et al discloses various anticorrosion metals, it does not disclose a tin solder or solder having tin as the main component for the corrosion cover for the exposed conductor wires. Both of independent Claims 18 and 19, however, specifically recite that the exposed

conductor wires are covered with a solder whose main component is tin. This feature of the invention is also neither taught nor suggested by Takayama et al. Moreover, the provision of tin solder or solder whose main component is tin protects the conductor wires, as noted previously. Accordingly, Applicants respectfully submit that Claims 18 through 22, 24 and 25 distinguish over Takayama et al.

Claim 23 has been rejected as unpatentable over Masuda in view of Komada et al. However, for the reasons noted previously, Applicants respectfully submit that the Masuda reference differs fundamentally from the present invention, and nothing in Komada et al would teach or suggest a modification of Masuda in a manner which would replicate the present invention as defined in Claim 23.

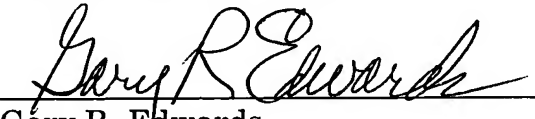
If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and

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please charge any deficiency in fees or credit any overpayments to Deposit
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Respectfully submitted,



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Attachment – Translation of Priority Document

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